



# ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: JT9D-7A  
 UNIQUE ID NUMBER: 8PW087  
 COMBUSTOR:  
 ENGINE TYPE: TF

BYPASS RATIO:  
 PRESSURE RATIO ( $\pi_{00}$ ): 20.3  
 RATED THRUST ( $F_{00}$ ) (kN): 205.3

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
D <sub>p</sub> /F <sub>00</sub> (g/kN) or SN	64.0	145.6	61.8	12.9
AS % OF ORIGINAL LIMIT	326.6	123.4	76.7	74.4
AS % OF CAEP/2 LIMIT (NO <sub>x</sub> )			95.8	
AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )			120.0	
AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )			136.4	
AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )			169.5	

### DATA STATUS

x PRE-REGULATION  
 - CERTIFICATION  
 x REVISED (SEE REMARKS)

### TEST ENGINE STATUS

- NEWLY MANUFACTURED ENGINES  
 - DEDICATED ENGINES TO PRODUCTION STANDARD  
 x OTHER (SEE REMARKS)

### EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE  
 (ANNEX 16 VOLUME II)

### CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)  
 x OUT OF PRODUCTION (DATE: - )  
 - OUT OF SERVICE (DATE: - )

### MEASURED DATA

MODE	POWER SETTING (%F <sub>00</sub> )	TIME (minutes)	FUEL FLOW (kg/s)	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NO <sub>x</sub>	
TAKE-OFF	100	0.7	2.099	0.10	0.00	38.70	12.3
CLIMB OUT	85	2.2	1.789	0.10	0.00	28.50	9.5
APPROACH	30	4.0	0.619	1.30	7.60	7.60	2.5
IDLE	7	26.0	0.211	36.10	83.60	3.10	0.7
LTO TOTAL FUEL (kg) or EMISSIONS (g)			802	12108	28647	12291	-
NUMBER OF ENGINES				10	10	10	10
NUMBER OF TESTS				10	10	10	10
AVERAGE D <sub>p</sub> /F <sub>00</sub> (g/kN) or AVERAGE SN (MAX)				59.0	139.6	59.9	12.3
SIGMA (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)							
RANGE (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)							

### ACCESSORY LOADS

POWER EXTRACTION 0 (kW) AT - POWER SETTINGS  
 STAGE BLEED 0 (% CORE FLOW) AT - POWER SETTINGS

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	97.9-101.7
TEMPERATURE (K)	276-300
ABS HUMIDITY (kg/kg)	0.003-0.0149

### FUEL

SPEC	DERD 2494
H/C	
AROM (%)	

MANUFACTURER: Pratt & Whitney  
 TEST ORGANIZATION: NGTE, Pyestock, UK  
 TEST LOCATION: British Airways Engine Overhaul Ltd, Wales  
 TEST DATES: 01/03/1976-01/07/1977

### REMARKS

1. Emissions estimated from JT9D-7 engines using JT9D-7A performance data.
2. Tests performed on in-service engine(s), after overhaul.
3. SN (char) wrongly calculated originally [1PW021].
4. Corrected to 12.9 SN in version 15 and % of standard recalculated

Compliance with Fuel Venting requirements: - ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)